

## CLAIMS

- 1 1. A field controller for use in a process control system including an area controller and at least one  
2 field controller, the field controller managing at least one controlled device in an industrial process  
3 operation, the field controller comprising a processor module segment and at least one expansion  
4 module segment:
- 5 A. said processor module segment including a processor module and at least one local interface  
6 module for interfacing to a control device, said processor module and said local interface  
7 module being connected by a processor module bus segment, the processor module bus  
8 segment further being connected to an upstream off-module connector,
- 9 B. each expansion module segment including at least one expansion interface module, a  
10 downstream off-module connector and an upstream off-module connector, interconnected by  
11 an expansion module bus segment, the downstream off-module connector being adapted to  
12 mate with the upstream off-module connector of the processor module segment and of an  
13 expansion module segment, thereby to facilitate the interconnection of the processor module  
14 segment and a sequence of expansion module segments by establishing a unitary multi-drop  
15 bus comprising the processor module bus segment and expansion module bus segments in the  
16 sequence,
- 17 the processor module controlling each controlled device through the respective local interface module  
18 or expansion interface module connected thereto, said processor module segment and each said  
19 expansion module segment being mounted in a housing segment configured to form a unitary housing.